

ABSTRACT

The present invention contemplates a programmed displacement to prolong the usage life of UV crystal for deep UV generation by displacing step by step the crystal with interval between steps much shorter than the degradation time of the crystal. Meanwhile, the present invention contemplates the programmed displacement to obtain stable UV generation by avoiding defect locations of the crystal. Further, the present invention contemplates the programmed displacement to achieve optimal stability in UV power for each layer of UV ablation in photo-refractive surgery.